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OF

CHILDREN'S DISEASES.

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Introductory.

IN 1896 a praiseworthy attempt was made in this country to start an Anglo-American Journal of Children's Diseases, to be published simultaneously here and in America. The English edition was not a financial success, and in a short time the venture succumbed to inanition as far as this country was concerned. The American publication, however, grew rapidly and flourished, and continues to flourish, in spite of the fact that there is another and senior journal dealing with diseases of children, viz. the well-known 'Archives of Pediatrics.' The Americans at this time, be it understood, were far in advance of Englishmen in all matters relating to children's complaints. Men in the United States whose names are a household word there devoted their lives to that study, and the children's hospitals in that country justified their existence by the good work which emanated from them at the hands of the men who honoured them by their intelligence and industry. Such well-known organisations for the study of children's complaints as the American Pediatric Society and the Philadelphia Pediatric Society were in active operation while in the Mother Country nothing was done, and the serious study

of children's ailments, which was of national importance and a national want, received but scant attention. When we make this observation, be it understood that we are speaking in a general sense. We fully appreciate, and do not intend to belittle, the good work done by a few of our countrymen, but their work is more work of the past than of the present. Although 'Pediatrics' abandoned its English edition, the flow of fresh works on children's complaints from the other side of the Atlantic still continued to bear witness to the activity of our American cousins in this branch of study and literature. In 1900, however, this country at last was moved from its slumbers, and waking up to its necessities, a Society for the Study of Disease in Children was inaugurated. This Society may now be recognised as firmly established, and while naturally the clinical material for the meetings is largely supplied by those whose work is specially in connection with diseases of children, the large number of general practitioners who attend and participate in the debates shows that their interest has been thoroughly aroused and that a long-felt want has been supplied. The annual 'Reports' which it issues, of which three volumes have been published, bear witness to its good work and the industry of its members. The large and increasing attendances at its meetings, and the sustained and growing interest in this special branch of study displayed by its members, testifies to the strong virility of this Society and of the potential energy for future good work. The study of special branches of medical literature requires that Great Britain shall have an organ whereby it may exchange its news with the rest of the world interested in such matters, and record the work done in its midst, and at the same time present to its readers the work accomplished by others in the same field of labour. In respect to a children's journal Great Britain is years behind foreign countries, to wit America, France, Germany, and Italy, not to mention others, which are well provided in this direction and have been so for some time past.

Under such circumstances, the 'British Journal of Children's Diseases' need make no apology for this, its first appearance. The pages of the JOURNAL will always be open to any who may have cases of interest or observations of value to record. It will be well

illustrated, and photographs or drawings fit for reproduction, and of educational value, will be welcomed, and will appear in its pages from time to time. The object of the JOURNAL will be to keep its readers in touch with advances in knowledge in all that relates to the study of disease in children, whether of a scientific or a practical nature. Its pages will not only be devoted to the study of disease in children, but to the prevention of disease, and to all that appertains to the welfare of children, both physical and psychical. We shall hope to receive communications from all who have anything of interest to impart in relation to child life and well-being. Notes on children's hospitals, urban and rural, on convalescent homes for children, the work of societies for the amelioration of the modern conditions of child life, observations on public schools, private and State supported, communications from medical officers of health, coroners, factory inspectors, or others having infants and children under their immediate observation, will, we hope, be brought under the notice of our readers.

The beginning of this century found Great Britain far behind all other nations of any importance in the opportunities afforded for the study of children's diseases, in the encouragement given to undertake that study, and in the facilities at hand for the dissemination of knowledge in respect thereto. May we venture to hope and anticipate that ere many more years have passed this country will be in the van of progress, and that its future medical practitioners will be thoroughly grounded in the knowledge of children's complaints, and that when they receive their diplomas they will be fully equipped in this most important and at present much neglected subject.

If The Society for the Study of Disease in Children and the 'British Journal of Children's Diseases' accomplish this good end, they will not only have fully justified their existence, but they will have accomplished a very worthy mission.

Original Articles.

A CASE OF HEMICRANIA WITH THIRD NERVE PARALYSIS.

By James Taylor, M.D., F.R.C.P.,

Physician to the National Hospital for the Paralysed and Epileptic, Queen Square, and the North-Eastern Hospital for Children.

The patient whose case is the subject of this paper is a little girl, M. R—, aged 13, who came to the out-patient department, Queen Square, early in this year, complaining of a drooping of the left eyelid. She was subsequently admitted into the hospital, and I am indebted to the excellent notes of Dr. Gordon Holmes, the house-physician, for the following particulars, and to Dr. Howland for the photograph. The history was that she had been subject to headaches since early childhood, the pain being situated chiefly in the left frontal region. Vomiting was frequently associated with the headache. She had never had any trouble with her eye until the present attack, nor was there any history of diplopia until a few days before the drooping of the lid. A week before I saw her she had gone to bed one night fairly well, but with a severe headache, and when she awoke next morning she was unable to open her eye. She has not been able to open it since. A few days before this happened she says that she saw double, and her mother had noticed some squinting. Since the appearance of the eye symptoms she has vomited more frequently; indeed, during the last week the sickness has been almost continuous, and is quite unrelated to the taking of food. She had had a feeling of numbness on the left side of the cheek for about a week before I saw her. She was a delicate-looking child, bright and intelligent, and no abnormality was discovered, except that she had ptosis, external strabismus, defective upward, downward, and inward movement of the left eye, and a dilated pupil. She had, in short, paralysis of all the branches of the third nerve. The only other sign of disease about her was the presence of a presystolic murmur in the mitral area.

The progress of the case may be briefly related. She was taken into the hospital and treated with galvanism to the left eye, and half-drachm doses of the syrup of the iodide of iron. She was given full diet. On only one occasion was the headache so severe as to need any special treatment, and on that occasion a dose of five grains of phenacetin was sufficient to relieve her. She was only twenty-three days in the hospital, but when she went out all signs of her

FIG. 1.

paralysis had disappeared. The disappearance of the paralysis had been gradual. I have seen her frequently since, and, so far, there has been no obvious recurrence of the paralysis, although she says that on one occasion, after a severe headache, there was a little drooping of the left eyelid.

It may not be quite correct to look upon this as one of those cases of *"recurrent"* paralysis of the third nerve associated with one-sided headache, for there has been only one definite attack of paralysis. But at all events it is a case of one-sided recurrent headache, in which paralysis of the third nerve on one occasion was associated

with an unusually severe attack of head pain. The occurrence of cases in which such symptoms have been present, and in which paralysis of the third nerve has taken place repeatedly, is now well recognised. In some cases, apparently of a similar nature, paralysis of other cranial nerves—fourth, fifth, sixth, or seventh—as well as of the third has been present. In one case both third nerves suffered, and occasionally a slight degree of optic atrophy has been described. But by far the most common variety—so much the most common as really to constitute a class—is that in which the third nerve is the only nerve affected. In such cases the usual history is that the attacks of paralysis are as a rule recovered from—completely at first, less and less completely afterwards, until finally the patient is left with very marked defect in all the parts that are supplied by the third nerve. Such cases have been called cases of migraine with third nerve paralysis, and Charcot* invented the name of "*migraine ophtalmoplegique*" to distinguish them from the ordinary attacks of migraine with visual symptoms—"*migraine ophtalmique.*" But it seems to me, as it has seemed to other observers, that there is an essential distinction between the two kinds of cases, for, so far as I am aware, no case of migraine with visual symptoms (hemianopsia, fortification lines, etc.) has been recorded in which there was associated third nerve paralysis, nor, on the other hand, am I aware of any case of hemicrania with third nerve paralysis in which the fortification lines or other visual phenomena of ordinary migraine were present. And while agreeing that the headaches in the two classes of cases are similar in their intensity and in their locality, I should be inclined to regard the cases associated with third nerve paralysis as essentially different in origin, and in most instances probably dependent upon some actual lesion in or affecting the third nerve itself. Mr. Holmes Spicer and Dr. Ormerod† have contributed a very exhaustive paper on those cases, and have quoted all the cases then available of the condition which had been published. It is a significant thing that, in all the cases in which there has been an opportunity of examining the condition post mortem, some morbid condition involving the trunk of the third nerve itself has been discovered, either tumour, or exudation, or granulations; and I am inclined to think that in all the cases in which this recurrent form of paralysis occurs there is a danger lest it may in time become permanent, and that it is probably due to some actual change in the nerve itself. When such a change becomes severe or extensive it will interfere

* 'Prog. médical,' August, 1890.

† 'Ophth. Soc. Trans.,' vol. xvi.

with the function of the third nerve, whereas in the earlier and less severe stages it is only sufficient, perhaps by exciting more sensitive structures, to set up severe headache. As the morbid process gradually encroaches on the nerve it will tend to cause structural changes in it, and finally to abolish the function entirely. Such a pathological explanation corresponds with the clinical history of many of the cases. I am apprehensive lest in the case which I now relate the one attack of third nerve paralysis, and the still persistent unilateral headache, may indicate the presence of some actual lesion in the nerve itself; and if this view is correct a recurrence of the paralysis must, I fear, be anticipated.

A NOTE ON THE ANTIQUITY OF ACHONDROPLASIA.

By George Pernet,

Assistant to the Skin Department, University College Hospital.

There are at the British Museum a number of small Egyptian glazed earthenware figures (statuettes), most of them of some shade of green, which represent the deformity to which Parrot gave the name of achondroplasia (since re-christened chondrodystrophia fœtalis, and also called micromelia). The illustrations (Figs. 1 and 2) represent the statuette No. 128 (Case 131, third Egyptian room) in two positions, full face and profile. These drawings, as also those representing No. 131, have been made from the actual specimens by the kind permission of the trustees of the British Museum.

This statuette has been depicted in profile in Arundale and Bonomi's 'Gallery of Antiquities selected from the British Museum' (1842, plate vii, fig. 19), and copied thence into Wiedemann's 'Religion of the Ancient Egyptians' (London, 1897, fig. 30, p. 136). The achondroplasic deformity of the figure caught my eye whilst looking through the latter work. It is there designated as one of the Khnûmû, and on page 137 the following remarks occur:—"In the work of creation Ptah had been helped by the Khnûmû, 'the modellers,' who were generally counted as his children, although later as those of Ra. They were represented as dwarfs with big heads, crooked legs, very long arms, and long moustaches;* grotesque figures which, as Herodotus† tells us, excited the derision of Kambyses

* Query Snakes? (Trans.) (Wiedemann, *op. cit. supra*).

† Herodotus, iii, 37 (cf. Wiedemann, 'Herodot's Zweites Buch,' p. 236, *op. cit. supra*).

in the temple of Hephaesto at Memphis. Countless little glazed earthenware figures of these gods are found in Egyptian tombs; for even as once the Khnûmû had helped in the making of the world, so would they help to reconstruct in all its members the body of the dead man in whose tomb they were laid." With reference to the foregoing quotation I should like to point out that the arms are not very long, but on the contrary very short (micromelia).

According to Dr. E. A. Wallis Budge, keeper of the Egyptian

Fig. 1.

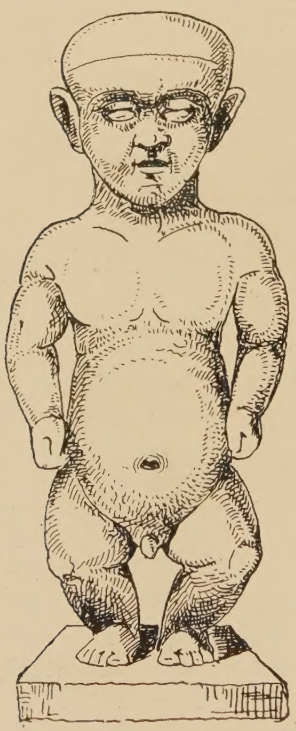
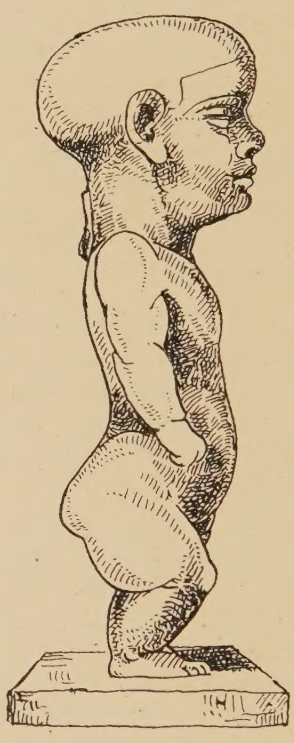


Fig. 2.



and Assyrian antiquities at the British Museum, to whom I am indebted for the information, these statuettes are representations of the god Ptaḥ-Seker-Asar, the triune god of the Resurrection. At the time of my visit to the Museum, Dr. Wallis Budge also kindly pointed out to me an archaic representation of a dwarf in relief on a stone (No. 35018, Case 7, landing of the north-west staircase close to the third Egyptian room), going back to 4000 B.C. The dwarf was an object of veneration, for the stone was his tombstone. This representation is so primitive that it is impossible to say for certain

if it was meant for an achondroplasic condition, which deformity is undoubted in the case of the statuettes illustrated in this note. In the Case 131 (*vide supra*) there are numerous similar statuettes. I would here mention No. 131 with part of one leg missing, shown in Figs. 3 and 4 (full face and profile).

In the interesting work on 'Les Difformes et les Malades dans l'Art' (1889), by the late Professor Charcot and Dr. Paul Richer, a

FIG. 3.

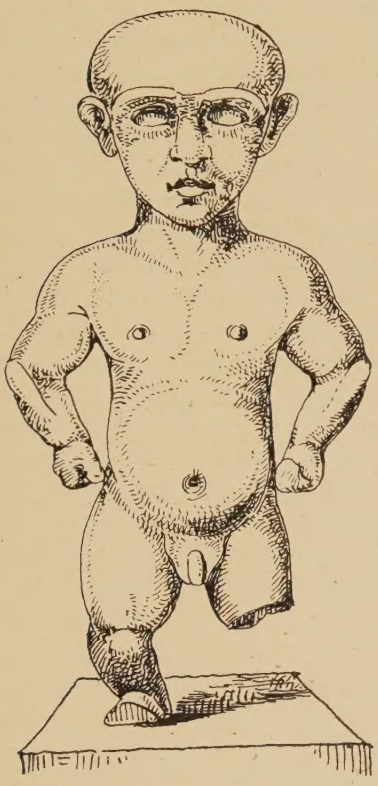
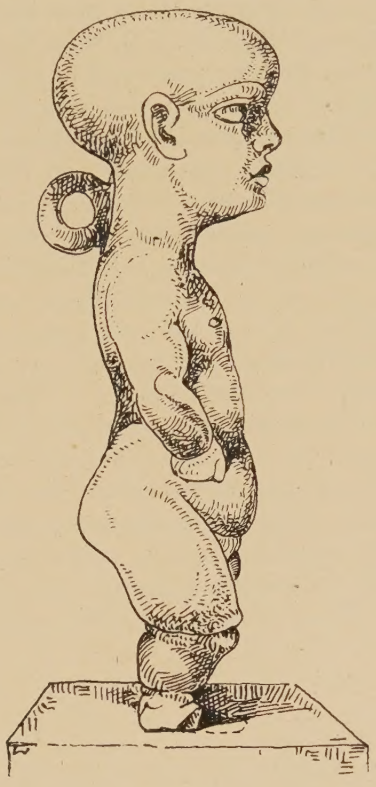


FIG. 4.



chapter is devoted to "Les Nains, les Bouffons, les Idiots." * In it (p. 13) there is a reference to the statuette of the dwarf Khnouhmotpou (Boulak Museum), with two drawings which are here reproduced. In connection with this figure the authors mention the achondroplasic malformation described by Parrot, and make the following remarks: —"Qu'il faille l'appeler comme le voulait Mariette, un cuisinier ou, comme le propose M. Maspero, un chef des parfums ou un maître de

* See also Richer's recent beautiful edition of this work, 'L'Art et la Médecine,' 1902.

la garde-robe, Khnoumhotpou dut être un personnage. Il avait à Sakkarah une des belles tombes de la Nécropole."

Looking at these figures, the idea of connecting them with the ancient fable of the pigmies has no doubt occurred to others, just as it did to Charcot and Richer. That pigmies do exist in Africa is now a well-established fact and no fable. Du Chaillu, in his 'Country of the Dwarfs' (1872), refers to the forest dwarfs he saw as well proportioned. In this connection I may in passing mention Tyson's Pygmie, which was identified by Huxley ('Man's Place in Nature,' 1875, p. 13), who had an opportunity of examining the actual skeleton preserved in the Cheltenham Museum, as *Troglodytes niger*. Those interested in the subject will find many curious details in Edward Tyson's 'Philological Essay concerning the Pygmies, the Cynocephali, the Satyrs and Sphinges of the Ancients,' 1699, or in Professor Bertram Windle's recent edition of that essay. The evidence therefore points to the conclusion that the Egyptian glazed figures in our British Museum to which I have ventured to call attention are examples of achondroplasia, and are not representative of the Negrilloes, or African pigmies. An interesting point about the Negrilloes is that they are covered with a fairly thick down over the entire body (*vide* Deniker's 'Races of Man,' 1900, p. 456).

I cannot conclude without alluding to Dr. Pierre Marie's illustrated paper on "L'Achondroplasie dans l'Adolescence et l'Âge Adulte" ('La Presse Médicale,' No. 56, 1900, p. 17), especially as to the possibility of achondroplasia being hereditary—a point, I may add, of some archæological interest in the case of the statuettes of the god Ptah-Seker-Asar, the triune god of the Resurrection, and of the so-called Khnûmû of the ancient Egyptians.

CONGENITAL HYPERTROPHIC STENOSIS OF PYLORUS.*

By Edmund Cautley, M.D.Cantab., F.R.C.P.Lond.,
Physician to the Belgrave Hospital for Children, and the Metropolitan Hospital.

It is almost justifiable to speak of congenital hypertrophic stenosis of the pylorus as a new disease, for it has attracted very little attention until recent years, although no doubt it has existed from

* Read before The Society for the Study of Disease in Children, November the 20th, 1903.

time immemorial. The earliest record of the affection in infancy is in 1841, when Williamson showed a specimen at a meeting of the Anatomical Society in Edinburgh, as "A Case of Scirrhus of the Stomach, probably Congenital." Death had resulted at the age of five weeks after the usual symptoms, and with the characteristic post-mortem appearances. He regarded the condition as "a peculiar hypertrophy or modification of the cellular tissues," and he stated that he was unaware of any other cases. Dr. William Osler, of Baltimore, has, however, found the record of a case in a volume entitled 'Cases and Observations by the Medical Society of New Haven County, in the State of Connecticut,' New Haven, 1788. The case was reported by Hezekiah Beardsley as a "Case of Scirrhus in the Pylorus of an Infant." Although the symptoms dated from the first week of life, the child lived to his fifth year. Another case was recorded by Dawosky in 1842, but after that no more were reported until 1888. In a paper on the subject read before the Royal Medical and Chirurgical Society on November the 8th, 1898 ('Med.-Chir. Trans.,' vol. lxxxii, 1899), I gave a *résumé* of seventeen cases collected from medical literature, together with details of two fresh cases, and of a specimen in the museum of St. Bartholomew's Hospital. Of these twenty cases, three had been under Dr. John Thomson, of Edinburgh, who had published two valuable papers on the subject.

Since then the affection has attracted more attention. In a joint paper with Mr. Clinton T. Dent, read before the Royal Medical and Chirurgical Society on December the 9th, 1902 ('Med-Chir. Trans.,' vol. lxxxvi, 1903), we mentioned that the total number of recorded cases was then well over fifty, and that we were able to set forth details of nineteen cases of operation to relieve the stenosis. More cases have been recognised during the present year, many of which have not been reported. Three have come under my own observation.

Enough has been said to show that the disease may be uncommon, but that, as I stated in my first paper, "it is not so extremely rare as might be supposed." It is distinctly the cause of that symptomatic disease "marasmus" in some cases. In view of the enormous number of deaths ascribed vaguely to "debility, atrophy, and inanition," it is highly probable that, when attention is directed to this affection, some of them will be recognised as due to this cause, and as capable of being saved by proper treatment.

No less than ten cases have come under my notice since 1897. That the affection is not more frequently recognised is partly due to the difficulty of diagnosis, unless attention is specially directed to

this point. One of the main symptoms is vomiting, but infants vomit so frequently that the symptom does not always attract the attention it deserves. Again, in hospital practice the cases may not get beyond the out-patient room, where they are treated as simple cases of marasmus.

For these reasons it is of the highest importance that the subject should be well ventilated. It is one which more especially concerns the family practitioner. As will be seen from the consideration of the age, the mode of onset, the symptoms, and the cause of the disease, the responsibility of diagnosis and treatment will in the first instance fall upon the doctor who has attended the mother in her confinement. The symptoms develop early, and the earlier the affection is diagnosed, the better chance has the child. The greatest care must be used in making a diagnosis, or infants will be operated on unnecessarily for vomiting and constipation due to other causes. It is more probable that an error in diagnosis be made in the other direction, and that the vomiting will be ascribed to some error in the diet, or its importance may not be recognised.

Summary of Cases.

No.	Date.	Sex.	Age.		Nature of operation.	Remarks.	Reference.
			At death.	At operation.			
1	1897	M.	14 weeks	—	—	In hospital for 9 days; weight 7¼ lbs.	Med.-Chir. Trans., vol. lxxxii, 1899.
2	1897	M.	7 weeks	—	—	Died as an out-patient after one attendance	Ibid.
3	1900	F.	3 months	—	—	Died the day after admission; weight 6 lbs. 3 oz.	Lancet, 1900, vol. ii, 256.
4	1901	M.	9 weeks	—	—	Under me as an out-patient; admitted as in-patient; weight 4 lbs. 8 oz.	Blackadder, Brit. Med.Journ.,1901, vol. i, 765.
5	1902	M.	2 months	—	—	Examined by me, post mortem, for Dr. Champneys	Brit. Med. Journ., 1902, vol. i, 1340.
6	1902	M.	5 months	8 weeks	Pyloroplasty	Readmitted subsequently, and died from epidemic diarrhœa	Cautley and Dent, Med.-Chir. Trns., vol. lxxxvi, 1903.
7	1902	M.	—	6 weeks	Ditto.	Is a very fine, strong child	Ibid.
8	1903	M.	—	7 weeks	Ditto.	Subsequently had a bad attack of enteritis due to improper feeding	Repts. of Soc. for Dis. in Children, vol. iv, 1904.
9	1903	M.	14 weeks	—	—	Showed a marked absence of some of the characteristic symptoms.	Ibid.
10	1903	F.	—	5 weeks	Pyloroplasty	Uninterrupted recovery	Ibid.

From the appended summary of ten cases, it will be noted that there were eight males and two females. Such a preponderance of males is not seen when larger numbers are taken, and there is no reason why males should be more susceptible than females. The family history does not seem to have any influence. As a general rule the other children of the family are healthy. A neurotic history was markedly present in two cases (5 and 10), and might be thought of importance by those who, like Dr. Thomson, hold the view that the cause lies in defective innervation, naming the affection "congenital gastric spasm." In one case (7) the grandmother on the father's side lost a sister in infancy whose death was ascribed to "nothing passing through her stomach." This child vomited everything. In Case 10 it was also a coincidence that the maternal grandmother had had some operation on the pylorus in later life.

Symptoms.—In almost every case it has been noted that the child was "a fine baby born." Sometimes it is the firstborn, at others it is a later child, the first children being quite unaffected. The first symptoms may come on a few hours after birth, or may not appear for a month or more. Usually they appear in the second or third week. Until the child starts vomiting there may be no indication of anything wrong. In some instances it has been noted that the babe has not taken food as readily as previous infants, that it is more easily satisfied. Or there may be flatulence and constipation. Vomiting is the most important and the most characteristic symptom. It is not accompanied by nausea, and the intervals between the attacks may be fairly long ones. In the best marked cases two or three feeds are kept down, and then apparently the whole lot is brought up at once. Gradually the vomiting becomes more and more frequent, and may occur on the administration of the smallest quantities of food. In rare instances it is not a marked feature. The act of vomiting is a forcible one, like that seen in older children. It causes some pain, but the babe is most comfortable when the stomach is empty. The character of the vomit depends upon the diet. There is no bile present. In late stages there may be mucus in it. Constipation may be present throughout, and may be a marked feature. It is not invariably present, being dependent upon the amount of stenosis. Sometimes there is actual diarrhœa, though the stools may be small. This results from irritation from decomposing or unsuitable food which has passed through the pylorus. The tongue is clean and the breath sweet in typical cases. On inspection of the abdomen there are no signs of intestinal obstruction.

Usually there is distinct evidence of gastric dilatation, and visible peristalsis may be present. In a marked case a wave of peristalsis may be seen passing from left to right, stopping at the pylorus momentarily, and then passing onwards down the duodenum. It may be induced by tapping the epigastrium or by applying a cold finger. On the other hand, it must not be forgotten that dilatation of the stomach and visible peristalsis may occur independently of stenosis of the pylorus of this nature; also, that the stomach is not necessarily dilated during the earlier stages. The pylorus can usually be felt, on careful palpation, about half an inch to the right of and three quarters of an inch above the umbilicus. It is deeply seated, and feels about the size and shape of a filbert. I have felt it in the last five cases which I have seen. The general condition of the child in late stages is that of marasmus, due to starvation.

The *diagnosis* is based on the history of progressive wasting, vomiting increasing in frequency and characteristic of pyloric obstruction, constipation, clean tongue, sweet breath, dilatation of the stomach, visible peristalsis, and the presence of a tumour. It must not be mistaken for the simple regurgitation of food so common in infants, or for simple gastric catarrh. I believe, too, in the existence of cases of pure pyloric spasm leading to death from persistent vomiting—cases in which no hypertrophy of the pylorus is found at the autopsy. Such cases are very difficult to diagnose from the affection under consideration. Possibly operative treatment is the most appropriate measure in these also.

The *anatomical condition* found post mortem is a simple but extensive hypertrophy of the circular muscular fibres forming the pylorus. The pylorus, instead of being about the thickness of the old-fashioned wedding-ring, forms a cylindrical tumour about an inch long. The thickening is most marked at the duodenal end, and thins off towards the stomach. Looked at from the stomach side, the pylorus is funnel-shaped. From the duodenal side it has the appearance of projecting into the duodenum, and looks like the os uteri. The stenosis is not complete, for it is easy to pass a probe through. For practical purposes it may be regarded as complete in many cases, for the mucous membrane is thrown into folds by the contraction of the circular muscular fibres, or into one large fold, which stands out, when the pylorus is laid open, like the verumontanum in the prostate. These folds of mucous membrane complete the obstruction during life. The degree of stenosis after death depends partly on post-mortem contraction, and is no measure of the stenosis during life. In one instance (9) nothing could be squeezed

through the pylorus, but both the small and large intestines contained a considerable quantity of normal fæces.

The *prognosis* is very bad unless operative measures are adopted. It is possible that there are mild cases which may be sufficiently relieved by careful diet, rectal feeding, and by lavage and gavage. Indeed, I have little doubt that some of the cases of hypertrophic stenosis in older children and in adults are simply a persistence and amplification of the infantile condition. My personal feeling is strongly in favour of operation by pyloroplasty. Mr. Clinton T. Dent has operated on four cases for me successfully. The choice of operation lies between pyloroplasty and Loreta's operation, in which the pylorus is simply stretched. It is perhaps too soon to say which will give the best results. On theoretical grounds I can see no possibility of recurrence after pyloroplasty, for the circular muscular fibres are fully divided. Similarly, there seems no strong reason why re-contraction should not ensue after a mere stretching of the muscle-fibres. Granted that the affection has been diagnosed, there is nothing to be gained by waiting, and the chance of life is small under all other methods of treatment.

It must not be thought that all cases are typical. Thus in one (9) there was no characteristic vomiting; no great constipation—in fact, a large, almost normal stool was passed eight days before death; there was no marked dilatation of the stomach; and peristalsis was only seen on one occasion. The pylorus was palpable, however. On the assumption that the degree of stenosis was not severe, and that sufficient food was passing through to support life, operation was postponed, but the child soon succumbed to an attack of diarrhœa and the marasmus. Thus the affection can produce a profound marasmus, although the stenosis is not complete. Probably an operation at an earlier date would have saved the child.

Pathology.—I believe the condition to be due to a simple redundancy of fœtal growth. Nature, in her extreme anxiety to provide an efficient pyloric sphincter, has over-exerted herself, and has produced too great a quantity of muscular tissue. Thomson holds that "the essential lesion is not a muscular, but a nervous one—a functional disorder of the nerves of the stomach and pylorus leading to ill-co-ordinated and therefore antagonistic action of their muscular development."

ON CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS.*

By C. T. Dent, M.C., F.R.C.S.,

Surgeon to St. George's Hospital, and to the Belgrave Hospital for Children.

The number of cases of congenital hypertrophic stenosis of the pylorus that have been operated on in infancy and published† is still so small that it seems desirable to set down some recent clinical experience on the subject, more particularly for the reason that the cases illustrate in their sequel many of the difficulties likely to be experienced. Highly typical cases of the affection may be expected to run a fairly straightforward course, but a fuller knowledge of the affection and the best method of treating it can only be gained by the accumulation of clinical observations.

The first case was that of a patient born on June the 4th, 1903. The mother's age was 33, and the child was her first. The labour was reported to have been a bad one, and the child was delivered with forceps. It weighed at birth about 7 lbs. From the beginning of its life it was fed by hand. Ten or twelve days after birth the symptoms commenced. It was noticed that the child was soon satisfied. The characteristic vomiting then commenced, *i. e.* three or four feeds might be kept down, and then the accumulated stomach contents were violently ejected. Various kinds of foods and medicines were tried, but without effect. Gastric lavage was not employed. When I first saw the child with Dr. Cautley on July the 23rd, the symptoms pointing to the condition, which had been suspected for some little time, of congenital stenosis were so pronounced that it was decided to operate at once.

At the time of operation the child weighed an ounce or two over 5 lbs., having therefore lost about 2 lbs. since its birth. It was exceedingly small and wasted. Gastric peristalsis was occasionally evident. A thickened pylorus had been felt, but when I saw the child I could not make certain that there was any thickening, as the abdomen was a little distended. Even slight distension will prevent the pylorus from being felt. It is not that the thin and supple edge

* Read before The Society for the Study of Disease in Children, November the 20th, 1903.

† In a paper in vol. lxxxvi of the 'Med.-Chir. Trans.' will be found a *résumé* of twenty cases.

of the liver obscures the pylorus, for in these cases, usually, the pylorus will be found rather lower and rather nearer the middle line than might be expected. The child was fifty-one days old at the time of operation.

The abdominal wall was excessively thin, and the peritoneum almost burst open when exposed. The pylorus was at once felt and drawn up into the wound. It presented a very characteristic and strongly marked instance of congenital hypertrophic stenosis. The thickening involved the pyloric antrum partially, but extended also some way down over the commencement of the duodenum. The thickening was nearly an inch in length, and the tumour had the white appearance that is usually seen in these cases. The stomach was not dilated. Pyloroplasty was performed. A longitudinal incision about an inch and a quarter in length was made through the thickened tissues from the stomach down to the duodenum. The hypertrophied muscle was about half an inch in depth, and gave the characteristic creaking sensation as it was divided. There was marked absence of submucous thickening, and the mucous membrane was very pale. As usual, directly the opening was made into the stomach and a little gas had escaped, the remaining steps of the operation became easier. At the upper and lower extremities of the incision the mucous membrane was united to the stomach and the duodenum respectively. This was done in order to prevent crumpling up of the mucous membrane and consequent obstruction when the pyloroplasty was completed. The central, the most important stitch, was closed first. I have noticed in other cases that there may be considerable drag on this stitch at first owing to the action of the longitudinal muscular fibres of the stomach. If, however, this stitch is closed up rather slowly, the drag can be overcome without any risk of the stitch cutting through. When once closed there is no fear of its giving way. In some instances it may be found advantageous to close the lateral sutures before the central. The best form for the central stitch is a Halsted's suture. The remaining sutures came together satisfactorily and without any difficulty, notwithstanding the marked hypertrophy of the circular fibres. No food was injected into the duodenum at the time of operation. I have always had a feed ready to hand, but I have never actually yet injected it while operating. The proceeding would entail delay, and rapidity in these cases is of the first consequence. Five sutures in all were put in, a quite sufficient number to convert a longitudinal into a transverse wound and to close up the opening completely. An omental graft could easily have been added, but I refrained from doing this, as it

appears to me to be unnecessary and likely to lead to after-trouble. The operation from the commencement to the time that the child was replaced in bed occupied twenty-five minutes. The anæsthetic—a highly important factor in these cases—was admirably given by Mr. W. F. Fedden.

Rectal feeding was employed for the first twenty-four hours, small quantities of hot water being given by the mouth. I think there is no objection in these cases if it is thought necessary, and if the rectal feeds are not well retained, to giving food by the mouth after twelve hours or so; but some blood is generally vomited up after the operation, and so long as there is blood in the stomach it is unlikely that food will be retained. Next day the child took its food—peptonised milk and water—by the mouth fairly well. Two days later the vomiting had practically ceased, and it was evident that the passage through the pylorus was thoroughly patent. The temperature, however, was rather high, though the wound gave no trouble. The child was for many days kept back by constant diarrhœa due to enteritis. The stools were green, as they had been throughout the child's life, and much of the milk was found, undigested, in the stools.

The after-treatment was mainly directed to improve the enteritis. This trouble gradually improved, but the child's general condition mended but slowly. In this instance I had to deal with a rather delicate child in somewhat poor general condition, and operated on rather late. I have little doubt that if the operation had been performed earlier the after-treatment would have given rise to less anxiety. My own experience of these cases leads me to the strong belief that the operation is decidedly indicated when the weight continues to diminish under medical treatment or lavage; and this view is strongly emphasised by the information I have been able to collect, and by a study of the literature of the subject. It is possible that with such treatment the urgency of the symptoms may subside, but the mechanical condition of the pylorus still remains—a point to which I will return,—and there is a great and a constantly increasing risk of gastric dilatation, as well as of grave intestinal changes.

The child left the hospital on August the 27th. The parents lived in a very healthy place, and it was thought that the fresh air and surroundings, other than hospital, might improve the general health.

On September the 22nd, however, as the accounts of its progress were very unfavourable, it was readmitted. The child was then in a very emaciated state, and weighed only 5 lbs. 12 oz., *i. e.* it had

lost 14 oz. in weight since it had left the hospital. There had been some vomiting, but this had not the old character, the stomach contents not being forcibly ejected. The belly was much distended, and the coils of intestine could be plainly seen. There seemed little or no intestinal digestion, and a great deal of fermentation in the intestinal tract. The stools were very colourless. The vomiting soon ceased under altered conditions of diet and skilled nursing. In this case I found humanised milk answered well. Raw meat juice (cold extract) and cream were also added to the diet. Under this regimen the child soon began to improve, and as the enteritis subsided it began to put on weight fairly rapidly. It was not, however, till the child was nineteen weeks old that its weight was equal to that at the time of birth. It then began to improve much more rapidly, and at the time of writing looks well and happy, and weighs 10 lbs.

The case illustrates well the necessity for early operation in these patients. Delay will always, I believe, increase the difficulties and the anxieties of the after-treatment.

A consideration of the conditions will explain easily enough the sources of the trouble, and the slow improvement when operation is performed in a late stage. However pronounced the degree of hypertrophic stenosis, we may assume that some fluid passes through the pyloric opening. The copious vomit, however, furnishes clear evidence that the amount that escapes from the stomach into the duodenum may be very small. Now physiologists hold that the stimulus to the secretion of the pancreatic juice consists in the introduction into the duodenum of the acid contents of the stomach. The bile is probably excreted continuously. At the same time it seems reasonable to suppose that if the pancreatic juice is diminished in quantity the output of bile is often less. Two conditions then may obtain :—(1) The secretion of the pancreatic juice may be excited by the tardy introduction of the stomach contents into the duodenum, in which case there will be, as it were, an excess of pancreatic fluid in the intestine—more than is sufficient to deal with the minute quantities of food that pass on from the stomach. (2) If the reaction of the gastric contents long retained in the stomach does not preserve its acidity, then, when the food is passed on at an unnaturally late period after it has entered the stomach, the stimulus to the pancreatic secretion will no longer be furnished. The digestion of the fatty elements, therefore, must be gravely interfered with. It becomes, then, very important to ascertain in each case what the reaction of the stomach contents is when the vomit consists of accumulated feeds. Hitherto it does not appear that sufficient attention has been

paid to this point. If the gastric contents from long retention become neutral or alkaline, then the principal stimulus to the secretion of pancreatic juice is abolished, and any portion of the food that has passed through the obstructed pylorus can only be so imperfectly digested in the intestinal tract as to have no nutritive value.

The opinion is now held by physiologists, in marked contra-distinction to the old teaching, that no absorption of water takes place in the stomach itself. Very small quantities of proteid material are taken up. The progress of these children supports this view. In marked cases the patients die about the twelfth week after birth; and they die of starvation. The vomit is so copious that it is evident that very little, if any, of the water has been absorbed from the stomach; at the same time, sufficient absorption of nutritive matter might almost be taken up from the stomach alone to keep the children alive, say, for the few weeks for which they live, if unrelieved.

Of equal importance are the changes that must be brought about in the intestinal tract, particularly in the small intestine. If no food at all gets into the intestine, a point is reached, before actual death occurs from starvation, when recovery is impossible. The epithelial cells that have a selective power in the absorption of food from the intestine become atrophied, and when this stage is reached the introduction of food is useless, for it cannot be absorbed. Not only is nutrition impossible, but material introduced becomes an irritant when it ceases to be a food. In acute cases of hypertrophic stenosis the process of death is due to tolerably rapid starvation. Gradually an atrophic condition of the intestine is brought about, and these changes furnish a very simple and physiological explanation of the principal difficulty that is met with in the after-treatment.

The consideration, then, of the changes that must result from the form of obstruction under consideration in the case of a young child, emphasises strongly the necessity for early operation. The importance of giving mechanical relief to a mechanical disorder is still more marked in the case of infants than in adults, for the intestinal changes will probably go on more rapidly in the case of the very young. Not many years have elapsed since the tendency to undue delay in operating in most forms of intestinal obstruction, save in strangulated external hernia, was unfortunately only too marked. The results were disastrous. Surgeons were not called in until the condition was almost hopeless. Palliative operations—if any operations at all were performed—were the rule, and the want of success was so great when these half-measures were adopted, or

when more radical measures, in rare instances, were employed, that acute or subacute intestinal obstruction came to be looked upon almost as a hopeless condition. Matters improved as soon as the necessity for early operation was recognised. The same considerations apply in the case of this form of pyloric obstruction. After all, the condition is but a form of intestinal obstruction, and it may be nearly complete. It will not get well of itself, if at all marked. It will lead to early death in many instances, and even if ameliorated by medical measures, by gastric lavage and so forth, it is practically certain that the condition will persist.

It must be kept in mind that improvement does not follow always —indeed, seldom follows—immediately on operation. Rectal feeding may be necessary for some hours after operation, and the life of a greatly reduced and emaciated child, that has been suffering from constant vomiting, is very precarious when it depends for its nutrition on what it can absorb by the rectum.

Although it is, perhaps, premature to assert as an established fact that the condition, if present in a mild form, may persist through life, yet a sufficient number of cases are now on record to render it practically certain that such is the case.

It has been found necessary to operate on cases of hypertrophic stenosis of the pylorus at all ages, and the probability that most of these were really of congenital origin amounts almost to a certainty. Some authors—Hemmeter, *e. g.**—hold the view that these cases not occurring in infancy are the result merely of chronic gastritis. Without denying altogether that this may be the case, I feel quite sure that in most of the cases referred to in Hemmeter's book the chronic gastritis was a secondary symptom, and that many at least of the instances referred to in his remarks on non-malignant stenosis of the pylorus were essentially cases of a milder type of congenital hypertrophic stenosis. Plate x in Hemmeter's work shows a section of part of the stomach and duodenum from a case described as "Hypertrophic Stenosis of the Pylorus from Chronic (stenosing) Gastritis." The section appears from the text to be from an adult stomach. The resemblance to the condition that may be found in infants only ten or twelve weeks old is very striking. Reference to the illustrations that will be found in vol. lxxxvi of the 'Med.-Chir. Trans.,' accompanying the paper already quoted, will show the similarity at once. Proportionately, the amount of muscular tissue is the same. The chief difference lies in the amount of thickening in the submucous layer in Hemmeter's figured case. Dr. John Thomson

* 'Diseases of the Stomach,' by John C. Hemmeter, 2nd edit., p. 617.

has seen similar thickening in cases of congenital hypertrophic stenosis. To my mind the condition figured in Hemmeter's book may well have existed from birth. If this be so, the arguments in favour of early operation become exceedingly strong. The lifelong troubles that some of these patients have to endure might, there is every reason to think, have been obviated by early operation. At the same time I fully allow that as yet we do not know enough of the after-history of cases operated on in infancy to justify us in assuming positively that a permanent cure can be effected. The first recorded instance that I have been able to find of an operation done for congenital hypertrophic stenosis in infancy dates only from four years ago.

That the operation at a very early age is more difficult must not deter us from operating. The youngest patient on whom I have operated so far was thirty-four days old. In this case there was strongly marked hypertrophy of the circular muscles about the pylorus, but the child was still in good condition. The vomiting in this fourth case did not cease entirely for some days after operation, but then the child began to improve very rapidly. It is worthy of note that this child was exceedingly fortunate in being under the care of a most admirable nurse. The nursing of these patients after operation is one that demands the utmost skill, judgment, and care. It is too early yet to speak positively about this patient, for the operation was only performed on October the 23rd last, but at the time of writing the child has lost all its grave symptoms, is gaining weight, and seems perfectly well and happy. Still, even in this case, in which there was prolonged constipation before operation, there are slight digestive troubles which require watching.

I am still of the opinion, from the four cases that I have had, that pyloroplasty is the best operation that can be performed. The difficulties of this operation appear to me to be quite theoretical, and the experience at any rate of four cases, all of which have recovered, appears to me to give a flat denial to the views of those authors—and they are by no means few in number—who argue that the operation is altogether impracticable.

Elsewhere I have urged that dilatation of the pylorus or pyloroplasty are the best operations, and I am still of the same opinion, with a decided preference for the latter method. Gastro-enterostomy—an operation of immense value that has been rather indiscriminately employed of late—is a proceeding so much in favour at present that it would be strange if it had not been advocated as a treatment in congenital hypertrophic stenosis. Gastro-enterostomy has, indeed,

been spoken of as an ideal operation for the condition. The epithet seems rather strained when we reflect that it leaves untouched the essential cause of the trouble, a cause too, that, as I have furnished evidence for believing, will persist. To my mind gastro-enterostomy, as applied to these patients, is but a palliative makeshift. Bearing in mind the nature of the affection, it is surely better and certainly more scientific to deal with the part really at fault. That the condition of the pylorus can be remedied directly and efficiently there are now recorded cases enough to prove.

INTUSSUSCEPTION AND HENOCH'S PURPURA.

By G. A. Sutherland, M.D., F.R.C.P.,
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Henoch's purpura is a clinical variety of purpura hæmorrhagica which merits more attention than is usually paid to it. The affection runs a somewhat prolonged course, but commences suddenly without obvious cause or antecedent illness. It is characterised by recurrent attacks of hæmorrhage in the skin, the stomach, the intestines, and the kidneys; by severe colicky pains; by vomiting and diarrhœa; and sometimes by pains in the back, limbs, and joints. It terminates usually in recovery, rarely in death.

The symptoms affecting the alimentary tract to which I wish more particularly to refer are always of a marked character. The abdominal pain is severe, of a colicky nature, and is referred to the umbilical, the epigastric, or the right inguinal region. The patient cries out, tosses about, presses his hand on the abdomen, or presses the abdomen on the bed. Sickness soon follows, of an exhausting nature, and frequently the vomited material is blood-stained or consists of pure blood. The tongue rapidly becomes coated, the breath is offensive, and all appetite is entirely lost. At first constipation is marked, but in a few days, with or without the employment of aperient medicine, diarrhœa sets in, the motions are offensive and blood-stained, and soon pure blood is passed, it may be in large quantity, from the bowel. The act of vomiting, or an evacuation of the bowels, seems to give temporary relief to the abdominal pain. The abdomen is usually retracted, tenderness may be present on pres-

sure over the region of the colon, especially if tenesmus is a marked feature, as sometimes happens; but as a rule there is nothing abnormal to be detected on physical examination. Such an attack may last for a few hours or a few days, and then there is a gradual remission of the symptoms until the next attack. The following two cases illustrate certain unusual conditions.

Case 1.—A boy aged 5 years was admitted into hospital on October the 10th, 1903, with the following history. Eight days previously he had been seized with severe abdominal pain and vomiting. The pain was so severe that he screamed out frequently. The symptoms continued intermittently for four days and then passed off entirely, but only to recur two days later in a more persistent manner. The bowels had acted irregularly until the day before admission, when the motions were at first blood-stained, and later only pure blood in large quantity was passed. The sickness had ceased, but the abdominal pain was constant. There was nothing of importance in the family history, and the boy himself had presented no signs of illness before this attack. On admission his temperature was 98·8° F., the pulse 110, and the respiration 26 per minute. The boy looked ill and was suffering from almost constant attacks of abdominal pain, colicky in character, during which he threw himself about, or sat up in bed with his knees drawn up, or lay face downwards, pressing his abdomen on the bed. He referred the pain to the umbilical region. The abdomen was distended, the distension being most marked in the upper half. It was so resistent that examination was impossible without an anæsthetic. This was administered, and a careful examination failed to reveal any source of the pain. A rectal examination gave a negative result, but the finger on removal was found to be blood-stained. Five minims of laudanum were given for the relief of the pain. For the above notes I am indebted to Mr. Riley, the house-physician. I saw the patient on the following afternoon. He had not been sick since admission, nor had the bowels acted. The abdomen was more distended, and palpation was impossible. The pain had been relieved temporarily by the opium, but had recurred. After consultation with Mr. Murray it was decided to operate, as the symptoms indicated abdominal obstruction, most probably from intussusception. On opening the abdomen in the usual way the first thing to attract notice was enormously distended bowel, which passed upwards from the left iliac fossa underneath the ribs on the left side and partly across the abdomen. This proved to be the sigmoid flexure and part of the descending

colon. The cause of this distension was not very clear, and it may have been from a volvulus or paralytic in origin. The transverse and descending colon was rather collapsed. On going over the small intestine a part of the bowel about five inches long was found, which was dark in colour, evidently from extravasated blood, and with thickened walls. Separated about half an inch from this was a circular band of red colour, evidently a more recent hæmorrhage into the wall of the gut. Mr. Murray described the dark thickened portion of bowel as feeling exactly like an intussusception which had been reduced, and we had little doubt at the time that this reduction had taken place during the manipulation. There were no other hæmorrhages visible about the bowel; the mesenteric vessels were normal in appearance, and no further area of disease was discovered. During the night following the operation the patient complained at intervals of the abdominal pain, but it seemed less severe. The bowels acted three times, the motions being loose and offensive. For the next five days the boy's condition was fairly satisfactory; he had occasional pain, but it was seldom severe; the bowels acted regularly, the motions usually being offensive; there was sometimes blood in the motions, but only once of any amount; the abdomen was retracted and the wound looked healthy. Although the temperature was subnormal, the pulse-rate continued rapid, 120 to 130 per minute, and was very weak, while the tongue was inflamed and coated. Then the condition changed. Blood and mucus were passed in large quantity from the bowel, sometimes dark in colour, sometimes bright, and soon the hæmorrhage was continuous, the boy apparently losing all rectal control. He vomited occasionally, but did not appear to suffer much pain. There were now visible for the first time a few purpuric spots, brownish in colour, over the extensor surfaces of the knees and elbows. On the following day fresh spots appeared over the buttocks, the heels, the back of the neck, the ears, and the inside of the nose. The appearance of this purpuric eruption had been anxiously looked for in order to settle the diagnosis we had provisionally made of Henoch's purpura. For the purpose of this paper the further progress of the patient need not be given in full. There have been the usual relapses characterised by vomiting, purpura, malæna, abdominal pain (slight), and extreme lethargy; the knee-jerks have almost entirely disappeared; the boy has wasted rapidly during an attack, and has gained again rapidly in the intervals. Albumen has appeared in the urine, but without blood or casts. There have been no arthritic symptoms throughout his illness. He is now convalescent and has gone to the country.

Case 2.*—A girl aged 7 years was admitted into hospital in February, 1893, suffering from Henoch's purpura. The illness had commenced five weeks previously, when she returned from school one afternoon complaining of pain in the stomach, became sick, and vomited blood. She had a prolonged illness in the hospital, characterised by recurrent attacks of abdominal pain, vomiting of blood, melæna, bleeding from the nose and gums, purpuric eruption, albuminuria, and hæmaturia, but finally recovered and was discharged in May. In August she was readmitted with a history of a recurrence of all the symptoms a month previously. The abdominal pain was more severe, was referred to the umbilicus, and was spasmodic and colicky in character. Frequent small doses of morphia were required to relieve the patient's sufferings. The abdomen was soft and flaccid, and could be thoroughly palpated; but no localised thickening or tenderness could be detected. Sometimes the examination would be interrupted by an attack of colicky pain, which lasted a few minutes and then passed off. The child had attacks of bleeding from various organs similar to those already referred to. On September the 6th tenesmus became a marked symptom, and continued irregularly for some days. This was accompanied by the passage of blood from the bowel in larger quantities than before, the amount on one occasion being six ounces. Thirst and sickness were prominent symptoms, but there was no obstruction of the bowels, the motions being frequent, loose, and offensive. On the evening of the 19th a general convulsive seizure occurred, and the temperature rose to 104° F. The fit lasted for three hours, the patient was quite unconscious, and blood was passed by the bowel. The illness terminated fatally three days later, and during this period the girl remained in an almost comatose condition, the urine and fæces being passed involuntarily. At the moment of death vomiting took place, the matter ejected being stercoraceous in character.

At the necropsy, on opening the peritoneal cavity some foul gas escaped. The whole of the peritoneum was covered with pus and lymph, and some five ounces of pus were lying free in the cavity of the pelvis. The small intestine was distended, and the lower bowel was collapsed and empty, with the exception of the rectum, which contained fæces. At the cæcal region there was an intussusception, the cæcum and part of the ileum being invaginated into the colon for about four inches. The containing and the contained bowel formed an adherent mass, and in reducing the intussusception the bowel ruptured in several places. The whole of the intestine

* Recorded in full in 'Pediatrics,' November the 2nd, 1896.

involved was much thickened, black, hæmorrhagic, and gangrenous in appearance. The wall of the rest of the colon was normal in appearance, save for a number of small, superficial, clean-cut ulcers on the mucous surface, without any local thickening, but with a leash of congested blood-vessels surrounding each ulcer on the peritoneal surface.

The condition of suppurative peritonitis and a ruptured intussusception was probably produced in the following manner:—The fatal attack was introduced by hæmorrhage into the wall of the colon near the cæcum, leading to paralysis in the affected part, and to increased muscular contraction (with colic) in the adjoining part of the intestine. As a result of these strong muscular contractions the sound part of the intestine became invaginated into the paralysed and hæmorrhagic portion, a condition which was marked clinically by the onset of severe tenesmus. The obstruction in the bowel was not complete, as evidenced by the passage of fæces; but the circulation in the intestinal wall was interfered with to such an extent that first of all gangrene and later rupture of the bowel took place, an occurrence which was marked clinically by a convulsive seizure, and was followed by suppurative peritonitis and death.

It is rather a curious fact that in the first of these cases I should have diagnosed an intussusception which did not exist, and in the second should have failed to diagnose an intussusception which was present. I frankly admit the mistakes, and the best amends I can make is to record them, so that others may be prevented from falling into similar errors. It will appear from the above notes that intussusception may occur in the course of Henoch's purpura, and the mechanism of its production, as already described, seems sufficiently clear. Perhaps the most important symptom indicating the occurrence of this complication is tenesmus, severe and more or less constant. When an attack of Henoch's purpura sets in with vomiting, abdominal pain, and constipation, as in Case 1, the problem is more difficult. There was no trace of purpura about the skin, and there was marked abdominal distension, such as is not usually present in the abdominal crises of Henoch's purpura. As far as my own reading goes, such an onset, without any visible purpuric lesions, and with abdominal distension, is unique. Looking back on the case now, I think it would have been difficult to have made a definite diagnosis of Henoch's purpura at once, but the proper course would have been to have waited a little time, relieving the intestinal spasm by means of opiates.

The information gained from an ocular examination of the condition of the bowel may be of value, as comparatively few have seen the visceral lesions in Henoch's purpura. The purpura may take the following forms:—(1) Small petechiæ on the visceral peritoneum; (2) petechiæ on the mucous surface, which becomes necrotic and small ulcers form, which may lead to intestinal hæmorrhage; and (3) hæmorrhage into the wall of the bowel, which becomes thickened and inactive, the result being severe griping pain, and possibly intussusception.

A CASE OF HENOCH'S PURPURA IN WHICH A LAPAROTOMY WAS PERFORMED.

By Harold Burrows, M.B., F.R.C.S.,
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The patient, a boy aged 11 years, was sent to the Bolingbroke Hospital on July the 6th, with a note from his doctor. The note stated that the boy was suffering from fæcal vomiting, that he was passing blood by the bowel, and that he probably had an intussusception.

The history obtained from the mother was to the effect that the boy had been feeling "out of sorts" for about the last ten days. On the morning of July the 6th he was seized with violent pain in the abdomen, and shortly afterwards passed a formed motion with about a tablespoonful of blood, and was sick, the vomit being dark brown and smelling just like a motion. The doctor saw the vomit and says it was fæcal in character. He ordered the patient to be removed at once to the hospital.

On seeing the patient in the ward I found him to be pale, with an "abdominal" expression, and constantly moaning with pain which appeared to be intense, and which was mainly localised to the epigastrium. His tongue was brown, his lips and gums covered with sordes, and his breath peculiarly offensive. There was a swelling over the left lower jaw due to a carious molar. The pulse was 110, of fair volume—not of the abdominal type. Nothing abnormal was found in the heart or lungs. The abdomen was nearly motionless and the muscles were rigid, especially in the lower part, and there was general tenderness to palpation all over the abdomen. There

was no distension. No lump was palpable. Rectal examination revealed no tumour, but there was tenderness in the recto-vesical fold. There was no tenesmus. In trying to make a diagnosis two things seemed pretty clear to my mind: (1) that there had been fæcal vomiting; (2) that there was peritonitis. Although the patient had not vomited during the short time he had been in the hospital, I believed at the time, and am still of the same opinion, that there had been stercoraceous vomiting, because the mother's description pointed to this conclusion, the doctor had seen the vomit and declared it to be stercoraceous, while the appearance of the patient's tongue and mouth, together with the odour of his breath, seemed to place the question beyond doubt. Assuming, therefore, the fæcal vomiting to be a fact, I concluded that some obstruction of the bowel was present, in spite of the absence of abdominal distension. With regard to the diagnosis of peritonitis, there were rigidity and tenderness of the abdomen, and tenderness of the recto-vesical fold of peritoneum, as shown by rectal examination; while the severe pain and the expression of the boy's face lent countenance to the diagnosis. The fact that the pulse was not of the abdominal type, as also the cessation of the vomiting, I thought might be due to opium having been administered previous to the patient's admission. Reasoning on these lines, the two most likely possibilities appeared to be intussusception, or obstruction due to some inflammatory condition, perhaps in the region of the appendix. Of the two alternatives I was rather in favour of the latter, on account of the early appearance of signs of peritonitis.

I advised that the patient should be examined under chloroform, and that, if it were still thought necessary, an exploratory laparotomy should be performed. Accordingly he was anæsthetised. Under a moderate degree of anæsthesia the abdominal rigidity did not pass away, and no fresh light was thrown upon the nature or situation of the lesion present. A median incision was made below the umbilicus sufficient to admit two fingers. The peritoneum appeared to be healthy, the cæcum was not distended, the appendix was inspected and found to be normal, and no lumps or other abnormalities were discovered. So far as could be seen, the greater part of the small intestine was pale and nearly empty. Just as the abdominal incision was about to be sutured, however, a portion of congested small intestine was seen. On examining this it was found to be ileum a few inches from the ileo-cæcal valve. The bowel showed several small petechial hæmorrhages and some irregular patches of congestion from which the blood could be expressed. Over the congested

areas the peritoneum was sticky and had lost its gloss. No further investigation was made. The abdominal wound was sutured and the patient returned to bed, the carious molar being extracted before he recovered from the anæsthesia. Pus escaped from the socket.

On the following morning the patient was free from pain. A careful search was then made for other petechiæ, and it was found that there were some small purpuric spots on the backs of the elbows, on the buttocks, and on each leg over the tendo Achillis and heel. The urine was acid and showed excess of phosphates, with a faint trace albumen. The tongue was still very foul. The temperature was 99·6° F., and the pulse 110. The petechial hæmorrhages seen at the operation at first suggested the presence of a general septic infection connected with the dental abscess; but the temperature during the next few days was only slightly raised above the normal, and the patient did not seem sufficiently ill to justify the opinion. Within a few days there was a general eruption of purpura, and for the first time the possibility of the case being one of Henoch's purpura was considered. Dr. Goodhart very kindly saw the patient and confirmed the diagnosis of Henoch's purpura; at the same time he suggested that a more precise history of the illness should be obtained. The mother was therefore sent for and questioned further on the matter. She now stated that on June the 26th, eleven days before his admission to hospital, she had noticed her son to be walking lame. He explained this by saying his legs ached and felt stiff. His mother examined the legs and found them covered with bumps and red spots. She also found a rash on his elbows and buttocks. The boy said he felt quite well. On the following day the rash faded, and on the day after the patient went to Sunday school as usual. On the 30th a rash appeared all over his body, and he said he did not feel well. He also complained of toothache. Had this history been obtained earlier the patient would in all probability have been spared a useless laparotomy.

The history subsequent to the operation is interesting. The breath remained foul and the tongue coated throughout the patient's stay in hospital; and on every occasion on which it was tested the urine contained excess of phosphates, with a faint cloud of albumen on boiling and adding a few drops of dilute acetic acid. The appetite was always very poor, and there was a good deal of wasting. The fæces were pale, offensive, and usually not formed; although no complete examination of them was made, they showed, I think, that digestion was not being efficiently performed. There were frequent eruptions of purpuric spots, sometimes confined to the elbows and

buttocks, and at others distributed generally. No retinal hæmorrhages were observed. On July the 25th, after eating some chocolate, the patient had a sudden severe attack of abdominal pain, and passed shortly afterwards about 1½ ounces of blood by the rectum. He had the appearance of one who was suffering from a serious abdominal lesion. The pain was intense; 15 minims of tincture of opium given *per rectum* brought some relief. Three days after this attack there was a general eruption of purpura. The last occasion on which a general rash appeared was on August the 11th, and four days after this the patient was sent away to the sea-side. On November the 2nd he was again seen; he had become fat, had a good colour, and looked altogether the picture of health. There had been no more purpura since he left the hospital. An examination of the urine, however, showed the presence of albumen to the amount of 0·1 per cent., a good deal more than there had been at any time while he was an in-patient.

In placing this case on record I have been moved by the hope that it may serve to call attention to the surgical importance of Henoch's purpura. I do not remember to have seen any mention of the subject in a text-book of surgery, and yet my own case is not the only one where an unnecessary operation has been performed on a patient suffering from Henoch's purpura. In most recorded instances of this condition there has been a history of purpura for some days or weeks previous to the abdominal symptoms, and therefore in a doubtful case a careful inquiry should always be made with regard to this point. The absence of abdominal distension in my case would have led me to delay operating had there not been evidence of peritonitis. The latter symptom, in conjunction with the patient's age, induced me to advise immediate operation. With regard to the fæcal vomiting, it may be doubted whether this really did occur. For my part I believe it did, and it is interesting in this connection to read a recent report of a somewhat similar case in which stercoraceous vomiting is said to have occurred in the course of Henoch's purpura. The actual lesion giving rise to the abdominal symptoms I believe to be a hæmorrhage into the wall of the gut, and it is quite conceivable that such an accident might lead to a temporary blocking of the bowel, or might even set up reverse peristalsis.

Looking back on my case now as a complete clinical picture, I feel sure that had I taken the possibility of it being one of Henoch's purpura into consideration, and inquired more fully into the history of the illness, the patient would have been saved from an uncalled-for laparotomy.

ADMINISTRATIVE NOTES ON CHILDREN'S HOSPITALS.

By T. Glenton-Kerr,

Secretary of the North-Eastern Hospital for Children, Hackney Road, Bethnal Green, E.

Under this heading it is proposed to discuss, month by month, such matters relating to the management of, and policy adopted by, the children's hospitals as may be of interest to the medical profession.

There are, indeed, so many points of contact between the lay and the medical departments that few questions concerning hospitals will be found to be quite outside this definition of the scope of our notes.

The subject seems naturally to divide itself under two main headings, viz.:

1. Matters relating to internal management and administration, and

2. Questions of policy and principle.

I propose to commence with a subject that falls under the latter division, viz. the question of the co-operation of the children's hospitals of London with the members of the medical profession practising in their vicinity. I must ask provincial and colonial readers to bear with me while discussion is thus confined, promising that due attention shall be given to the institutions in other places on future occasions.

That the condition of affairs in London is as unsatisfactory as it well could be, no medical man outside the staffs of the various hospitals will, I take it, be found to deny. A state of war has existed for half a century, and still continues to drag wearily on. Why should this be?

I am told by my medical friends that when the cause of disease can be discovered, no difficulty is presented in its prevention or cure. Well, then, let us endeavour to discover the etiology of this ill-feeling.

As usual in such cases, there are serious faults on both sides. In the hospitals disparaging remarks are too often made by indiscreet resident medicos within the hearing of the patients' parents or friends as to the professional abilities of Dr. So-and-so, who, it may transpire, has had some case under treatment that has at length come to the hospital in a bad condition. These remarks (with additions) are tolerably sure to reach the ears of Dr. So-and-so in due course, and are quoted as the opinion of *him* entertained at the "orspital."

This is very deplorable, and can only be remedied by the constant exercise of influence brought to bear on the residents by the visiting staff, and by the enforcement of certain rules which could be suggested.

Then, the committees of the hospitals are much to blame for the attitude of absolute indifference to the interests of the local general practitioner which they commonly adopt in regard to what may be called the financial suitability of patients. In most cases some sort of inquiry is made as to the monetary position of parents, but with one sole exception this is of a very casual nature, and offers no guarantee that cases well able to pay a doctor are not included in considerable numbers amongst the daily out-patients.

The committees' aim, as a general rule, does not go beyond satisfying the authorities of the various public charitable funds as regards out-patient abuse, and announcing the treatment of as large a number of cases as possible. Committees fail to realise that, rightly understood, the interests of the hospitals (and I now speak of hospitals in general) are bound up with those of the general practitioners, and that if a feeling of good-fellowship could be established between the two forces the problem of financial support would not present such serious difficulties as it does at present.

It should not require much thought upon the subject to understand that if you could substitute a feeling of sympathy and goodwill for one of indifference or antagonism in a large body of highly educated men, exercising wide-spread influence upon the public, a great change for the better must necessarily be brought about in the flow of contributions to the coffers of the hospitals; and it is on this fact that we must rely for eventually leading the committees to seriously grapple with the problem.

So much for the faults on the hospital side.

With regard to the blame to be attached to the general practitioner, I should explain that my remarks refer more particularly to the poorer districts of London, and do not apply to any great extent to the well-to-do suburbs or the rich "West End," where the competition of the hospitals is scarcely felt.

The general practitioner is to blame for the attitude of unreasoning hostility, varied by a sort of malignant indifference, which he usually adopts towards the children's hospitals. He does not scruple to make use of them for the treatment of such cases as it may suit his convenience to send to them, and he knows from experience that a polite note from him is usually sufficient to secure for his patient admission to the wards.

So far he is treated well by the hospitals, and ought to make

acknowledgment of the fact. He is usually an extremist in his views on the abuse question, and refuses to be satisfied with anything short of the introduction of a law forbidding hospitals to treat anyone without a written recommendation from a medical man practising in the patient's neighbourhood. He is often eloquent upon the subject of mistakes in diagnosis and treatment made by hospitals, and on the deleterious effects to the health of patients which he alleges result from visits to the obnoxious institution that appears to trench more especially on his ground. This virulent form of criticism may have been provoked in some cases by the dissemination of stories of unguarded remarks on himself, such as I have previously mentioned; and under those circumstances, perhaps, we ought not to be altogether surprised at his antagonism; but still I think even then he carries his hostility too far, and might have been expected to take a larger view of the matter generally.

As far as I can see there is no other cause for the existing ill-feeling on either side than those I have mentioned above, and if this is really so there does not seem to me to be any good reason why a truce should not be forthwith declared and a peace eventually arrived at, to the lasting benefit of all concerned.

I am afraid many readers will regard this idea (which, of course, is anything but new) as something to be thought on in conjunction with the "Parliament of Man—the federation of the world," and if such there be I must hope to convert them when through the indulgence of a kindly editor I am granted space in this magazine for the discussion of the first practical steps that should, in my humble opinion, be taken in the path of reform which I have ventured to indicate.

The Society for the Study of Disease in Children.

A MEETING of the Society was held on November the 20th, at 11, Chandos Street, Cavendish Square, W., Dr. H. R. HUTTON (Manchester) in the chair.

An Anomalous Case of Diplegia was shown by Dr. JAMES TAYLOR. A child of four years, soon after an operation for an abscess on the right side of the neck, became altered mentally and lost the power of walking. Additional symptoms found on examination were—

occasional regurgitation of fluids through the nose, squinting, absence of knee-jerks, and marked inco-ordination. Most of the symptoms had passed off under treatment, but the degree of intelligence was not yet quite up to the normal standard. The diagnosis made at first was one of diphtheritic paralysis, although there was no history of sore throat. He was now inclined to look on the condition as some other form of toxæmia, which had led to alterations in the cerebral cortex.

Dr. Shuttleworth had never seen mental deterioration follow immediately on diphtheria, but he recalled one case in which an attack of diphtheritic paralysis was said to be the precursor of mental impairment. In the present case he thought that some previous mental weakness had been aggravated by the acute illness.

Dr. Fletcher Beach regarded the case as one of cerebral diplegia rather than diphtheritic paralysis.

A Case of Multiple Subcutaneous Tuberculous Nodules in a child eighteen months old was shown by Mr. Francis Jaffrey. The history of the case was that these nodules first appeared when the child was vaccinated at the age of three months. Several of the nodules had softened and burst. He found that vaccination was usually assigned as the cause of these nodules by mothers, and therefore advised the postponement of vaccination if any nodules were present.

Dr. Charles W. Chapman had had a case of similar nodules in an adult which was completely cured by the internal administration of iodoform.

Dr. Cautley recalled a case in a baby ten months old, who died ten weeks later from tuberculous meningitis. At the autopsy four caseating nodules were found in the brain, also caseous glands in the mesentery and mediastinum, and miliary tuberculosis of the lungs.

Mr. Lockhart Mummery suggested the excision of one of the nodules to determine whether it was a pure tuberculous affection or a mixed one.

Dr. Eric Pritchard had seen a case in a lady which had lasted for two years, and was finally cured by arsenic.

Twin Sisters, with Idioglossia aged 5 years, were shown by Dr. G. A. Sutherland.

Dr. Leonard Guthrie remarked on the strong family likeness which such cases showed, although the particular defects were not the same. He thought that in many cases there was defective visual memory, because if the child looked away from the speaker's

mouth it forgot how to form the words. The prognosis might appear to be hopeful, but he found a tendency to falling back if very careful and constant supervision were not maintained.

Dr. Parkes Weber referred to a case under his own care where idioglossia had followed on brain disease in early life. He thought that certainly the motor centres had been affected, and that there was defective cerebral development in his case. There had been very little improvement.

Dr. Henry Ashby (Manchester) did not like the word idioglossia, and preferred to describe the condition simply as defective speech. Such a condition was common in the special schools for backward children. He thought that one factor which was present was want of attention, and that this was coupled with a certain amount of mental backwardness. He would, therefore, assume some fault in the motor speech centre, combined probably with a defect higher up. The motor centre was such an extremely complicated mechanism that it was not surprising if it sometimes went wrong.

Dr. Shuttleworth agreed with the last speaker as to the frequency of speech defects in backward children. There was an element of laziness about the condition.

The President (Dr. Hutton) (Manchester) thought that the trouble was due to defective hearing and defective observation, coupled with a general lack of energy. The parents of such children were often of a somewhat low degree of intelligence, and therefore did not give to the children the proper amount of attention.

A Case of Premature Greyness of the Hair in a female child eleven years old was shown by Dr. George Carpenter. The condition was not inherited, and she was in other respects a perfectly healthy child.

A Case of General Paralysis of the Insane in a girl eleven years old was also exhibited by Dr. Carpenter. The symptoms dated back more than a year. Most of the day she talked incoherent nonsense, and was placid and fatuous; at other times she had screaming and weeping fits which lasted for a few hours. There was slight spasticity of the lower limbs, and the deep reflexes were increased. She had typical syphilitic teeth, pale optic discs, and a patch of choroiditis in one eye.

Dr. Fletcher Beach had collected notes of 200 cases of this affection, and in the majority of these syphilis was present. In children general paralysis usually developed at the time of the second dentition, and there were no delusions of grandeur such as were met

with in the adult type, but simply screaming and emotional disturbances.

Dr. James Taylor said that in his experience such cases commenced with gradual dementia and had associated fits, tremors, inactive pupils, and excessive or absent knee-jerks. In the majority there was the definite association with hereditary syphilis. The physical conditions in children were the same as in adults, but the mental conditions were different—namely, simple dementia in the former without delusions of grandeur.

A Case of Extensive Impetigo Contagiosa Bullosa in a child of three years, which bore a superficial resemblance to psoriasis, was also shown by Dr. Carpenter.

Mr. Pernet expressed the opinion that it was really psoriasis.

Three Cases of Sarcoma which had been operated on by Mr. Douglas Drew were described: (1) a spindle-celled sarcoma of the muscles of the back of the forearm; (2) an adeno-sarcoma of the testis; and (3) a round-celled sarcoma of the upper jaw.

A Case of Congenital Heart Disease with Dysphagia was shown by Dr. Eric Pritchard in an infant of five months. The difficulty in swallowing appeared to be due to inco-ordination of the muscles of deglutition. The child was gradually sinking into a marasmic condition, although the cardiac murmur was diminishing.

Dr. Sutherland had not met with the association of dysphagia with congenital cardiac disease, but agreed that dysphagia in infants was usually due to imperfect co-ordination, and said that time usually cured the condition.

An Unusual Case of Congenital Hypertrophic Stenosis of the Pylorus was brought before the Society by Dr. Edmund Cautley. The patient died at the age of fourteen weeks, and the pylorus presented the usual characteristics, but both small and large intestines contained a considerable quantity of normal fæces. While under observation he had gained thirteen ounces in weight during one period of two weeks, and six ounces during another period of one week. During life peristalsis was noted on one occasion only; the pylorus was palpable, the stomach was moderately dilated, and vomiting was present, but was not characteristic. There was not marked constipation, and even eight days before death a large and almost normal stool was passed. Dr. Cautley pointed out the difficulties of diagnosis in a case of this nature, and thought that many such were overlooked. Operation might have saved

the child's life, but the case was regarded as a somewhat mild form of the condition, and later on acute diarrhœa rendered operative interference inadvisable. He thought that the absence of characteristic vomiting in this instance might be urged as an argument against the view that the hypertrophy was due to spasm.*

Two Cases of the same Disease which had been successfully treated by pyloroplasty were read by Mr. Clinton Dent.*

A Case of Hypertrophic Stenosis of the stomach of a child two months old, which had been diagnosed and for which the patient had been admitted for operation, was shown by Dr. Alexander Morison. While under observation the patient vomited very little, and only occasionally exhibited gastric peristalsis. Operation was deferred and the patient was discharged, but returned five days later in a collapsed condition, with a temperature of 90° F., and died soon afterwards. At the necropsy the pylorus was found to be large, long, and hard. The stomach, inflated with air, only required the cardiac end to be ligatured to remain inflated, as the pyloric end was impervious. Dr. Morison dwelt on the necessity for operation in such cases, even when the condition was merely suspected to exist.

Mr. Howell Evans said that with congenital hypertrophy there might be a marked degree of spasm, which when aggravated by rritation, as from ill-digested food, would lead to dilation. He narrated a case on which he had been called to operate, but the patient became so collapsed that he was not able even to find out the condition of the pylorus.

Mr. Turtle had seen five cases operated on by dilation of the pylorus during the last twelve months, all of whom had recovered. Three of the cases returned later with diarrhœa of a very troublesome nature. He suggested that this might have been due to overstretching of the pylorus, so that it was unable to retain the food in the stomach sufficiently long for digestion.

Editorial.

ETIOLOGY OF THE VISCERAL CRISES IN HENOCH'S PURPURA.

The etiology of the abdominal symptoms—severe colic, vomiting, hæmatemesis, and melæna—which sometimes occur in the course of

* This paper appears in full in this present issue.

purpura hæmorrhagica has, until recently, been a matter of conjecture only.

The first case on record in which visceral crises occurred was supplied more than a hundred years ago by Willan (1). It was that of a lady aged 36, who, on June the 17th, 1792, after suffering a few days from painful inflation of the stomach, was suddenly seized with violent and almost incessant vomiting, accompanied by excruciating pains in the bowels and profuse diarrhœa, with the passage of black coagulated blood. The symptoms culminated in collapse, marked by languor, faintness, sweating, slowness of pulse, on the night of June the 25th, when a rash appeared, consisting of small circular patches confluent on the neck, and shoulders, and nates, but in other places distinct. On June the 27th the rash was of livid colour; the hands swelled, but the internal pain and discharge of blood ceased. On the 29th and 30th there was much pain in the limbs, particularly about the knee-joints, but she was in better spirits. On July the 1st and 2nd she was sick, weary, and restless, but there was no disorder of the bowels. The tongue was brownish and clammy, and there was considerable pain in the wrists. The rash began to fade on July the 3rd, and on the 4th livid spots were confined to the arms only, and the patient was able to sit up in bed. Two spots on the back of the left hand terminated with gangrenous sloughs. The complaint was succeeded by "large anasarcous swellings of the thighs and hands," which were not reduced till the end of August, and during that time she remained in a weak, irritable state.

Willan made no comment as to the causation of this typical case of what is now known as Henoch's purpura. Neither did Henoch, who, in 1874 (2), was the next to draw our attention to the visceral complications in purpura, throw light upon their etiology. Couty (3), in 1876, attributed them to an irritative lesion of the sympathetic system, comparable, to some extent, to that seen in lead-poisoning.

In 1890 von Dusch and A. Hoche (4) collected forty-four cases of Henoch's purpura, and discussed the causation of the abdominal symptoms. They suggested that they might be due to small emboli sms of the intestinal arteries, but concluded that nothing certain was known about it. "Wir wissen nichts Genaues."

Vierhuff (5) in 1893, related the case of an adult, who, in the course of an attack of purpura hæmorrhagica with intestinal hæmorrhage, developed all the signs of intussusception. Treatment failed in removing the intussusception, but the patient recovered after passing the affected portion of bowel, which had separated in course of time. From this case Vierhuff inferred that he had found in

purpura hæmorrhagica a new cause of intussusception, and assumed that a hæmorrhage had occurred in a part of the bowel, leading to paralysis and dilatation, and consequent invagination of the upper healthy and contracting segment of bowel.

A somewhat similar case, ending fatally, had been recorded by W. Milligan (6) in 1888.

In 1896 Dr. G. A. Sutherland (7) published a series of three typical instances of Henoch's purpura, one of which was fatal. After death purulent peritonitis was discovered, and also the existence of an intussusception at the ileo-cæcal valve. The part of the intestine involved was empty, the walls much thickened, black, hæmorrhagic, and gangrenous. A number of small, superficial, clean-cut ulcers were on the mucous surface of the colon, without any local thickening, but with a leash of congested vessels surrounding each ulcer on the peritoneal surface.

Dr. Sutherland gave the same explanation of the cause of the intussusception as that arrived at by Vierhuff.

The results of the post-mortem examinations recorded in other cases threw little light on the causation of the symptoms in patients who recovered, for death was due to complications. Thus in 1864 Stieldorf (8) found general œdema, spongy and bleeding gums, ecchymosis in most organs, pneumonia, pericarditis, pleural effusion, and ascites, whilst the intestines were coloured black in places. Wagner (9), in 1869, found, after death, pulmonary infarcts, purulent peritonitis, "croupous diphtheritic membrane" upon, and ulceration of, small intestines.

Zimmermann (10), in 1874, discovered necrotic ulcers in the small intestines, with perforation and peritonitis; whilst Silbermann (11) in 1887 found acute peritonitis from perforation at the fundus of the stomach—no ulceration of the bowels, but swelling and congestion of the mucous membrane. There were also necrotic foci in the stomach and intestines, and thrombi in some of the blood-vessels.

Osler (12) said in 1895, "The anatomical conditions associated with visceral symptoms are not well understood, but the changes in the gastro-intestinal canal, at least, are probably the counterpart of those which occur in the skin—namely, exudation of serum, swelling, hæmorrhage, and in some instances necrosis."

In 1898 Sir Stephen Mackenzie (13) said, "As to the nature of such cases, the evidence is inconclusive, and whether the colic and vomiting stand in relation to the hæmorrhage from the bowels as cause or effect is uncertain. Silbermann's case, however, suggests

that hæmorrhage is the primary event, and may lead to ulceration and perforation."

In the present year, Dr. Raymond Crawford commented as follows on three cases published in the 'Lancet' (14) :—"I have not hesitated to refer these crises of abdominal pain to extravasation, because of the close association of this symptom with extravasations that are visible to the eye on the surface of the skin. . . . The abdominal symptoms are such as may well be due to effusion into the wall of the gut, and in one case that I have seen, but which is not recorded, the diagnosis of acute intestinal obstruction was actually made until the appearance of the familiar symptoms cleared the picture."

The papers, therefore, by Dr. Sutherland and Mr. Harold Burrows, which are published in our present issue, are of exceptional value and interest, for they throw light on the immediate pathology of the visceral crises in Henoch's purpura, which has remained so long unexplained.

In two cases the symptoms were so severe as to render the diagnosis of intestinal obstruction plausible, and an operation justifiable. In both cases the obvious cause of the symptoms was seen by direct inspection to be extravasation of blood in the intestinal walls, which became thickened and inactive, the result being severe griping pain, melæna, and vomiting.

Clinical and post-mortem observations show that hæmorrhage into the intestinal walls may give rise to intussusception, and also that necrotic ulcers may perforate and cause death from purulent peritonitis.

It would seem that for the production of abdominal crises it is essential that the hæmorrhage should be within the intestinal walls, and not merely from the mucous surface, for melæna is extremely common in all forms of purpura without colic, and in such cases the hæmorrhage has been shown after death to proceed from petechiæ on the mucous surface only of the bowel.

The diagnosis of intussusception and consequent operation in the two cases which we publish are all the more excusable, considering that intussusception is now known to be an occasional complication of Henoch's purpura. The practical lesson seems to be that it is safe to avoid operation in cases where intussusception in the course of purpura is suspected, at all events until the symptoms become too urgent to admit of delay. Some help in the diagnosis is afforded by the fact that intussusception from any cause in children upwards of two years of age is comparatively rare, and also that Henoch's purpura usually terminates in recovery, even when signs of obstruction are present.

The remote cause of Henoch's purpura is still obscure. Most careful examinations of the blood have failed to supply a clue to the nature and origin of the disease. Yet it seems probable that bacterial toxins are generated in the intestinal canal, and break down albumens into peptones, which, becoming absorbed into the circulation, may produce poisonous effects upon the delicate capillary walls, and upon the vaso-motor nerves. Evidence of implication of the latter is instanced by the curious evanescent flushes of the skin, erythemata, tâches cérébrales, and urticarial eruptions common in this affection. The absence of the knee-jerks noted by Dr. Sutherland in all his cases is in favour of the existence of a poison which, like the albumoses of diphtheritic paralysis, has selective action upon the neuronic terminals.

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Excerpta Puerilia.

The Employment of Children Act.—We often talk of the blessings of civilisation, but there may be said to be the ills of such blessings just as there are the defects of good qualities. And further, while civilisation does not spell unmixed blessing, neither does it untrammelled freedom. Life continues to become more and more complicated, and legislation at the same time sets more and more a watch upon its every movement. One almost sighs for the life of the primitive community, when the man tilled the soil, the woman, aided by the girls, presided over the indoor necessities of the household, and the boys exercised a daily watch over the sheep, goats, or cattle as they fed over uncultivated uplands or on the grassy margins of brooks in the valleys. Our day is not the only day of advanced civilisation, but in all ages no small number of the men who have been distinguished in the field of action or thought—from the days of the Hebrew King who had been a shepherd boy, to Renan, the son of Breton peasants—have been born and bred in the comparative solitude of the country. If, however, it is absolutely necessary that the great bulk of the population should live in towns, it is well that we should be as much as possible upon our guard against its evils. The Employment of Children Act which comes into force on January the 1st, 1904, is directed against one of these evils. The Bill has been framed with the object of preventing injury to the health of growing children by their engaging in any work likely to be deleterious. The law forbids, firstly, the employment of children under fourteen between the hours of 9 p.m. and 6 a.m., unless the hours are altered by local authority; secondly, street trading by children under eleven; thirdly, employing a child under fourteen to lift, carry, or move anything so heavy that it is likely to cause injury; fourthly, employing a child in any capacity likely to be injurious to health or education, regard being had to the physical condition. The Bill further gives the local authority power, if they like, to make bye-laws regulating the age below which employment shall be illegal, the hours between which employment is illegal, and the number of hours daily or weekly that a child may work. The local authority also has the power of prohibiting or regulating any specific employment, including street trading. The provision which refers to street trading, refers, as might be expected, more particularly to girls.

Hungry school children.—It is undoubtedly necessary that the work of the uprising generation should be supervised, but possibly the health and vigour of future men and women of the poorer classes will depend more upon the quantity and quality of food they are eating to-day than upon the nature of their physical exertions. In the 'Wolverhampton Express' of December the 9th, under the heading "Give us this day our daily bread," it is mentioned that these words are often uttered at the commencement of morning school by quivering little voices issuing from lips through which probably no food had passed that day. In one part of the town of Wolverhampton a local Society had provided thirty breakfasts once or twice a week to needy school children during the winter. Once or twice a week during the winter, however, does little more than manifest the desire to supply a need, a desire by no means confined to Wolverhampton. In the 'Dundee Courier' of four days previously, we read that in the town from which that paper issues the School Board has been able with the aid of the public to provide about 500 children daily with soup, which is taken with bread brought by the children from home.

Tramp children.—Another Bill apparently is to be brought before Parliament for the "better protection of tramp children." This Bill was recently discussed before the Cuckfield Board of Guardians. One of the speakers stated that if van and barge children were excluded, the number of children being "dragged about" the country is much less than is ordinarily supposed. The speaker thought the tendency to "tramp" manifested a wide-spread peculiarity of the human mind which was not necessarily stronger in the children of tramps than in others brought up under different circumstances. He did not think that the children of tramps ultimately formed a large percentage of the vagrant population.

Nursing schools for girls.—A notice has appeared to the effect that the Women's Industrial Council will on January the 29th hold a conference for the purpose of considering the desirability of establishing schools for training girls of the industrial class in the care of children. It is scarcely necessary to remark that nothing is so likely to diminish the annual infant mortality as the adoption of methods calculated to dispel much of the ignorance which prevails upon the care of children, especially during the first few months of life.

Child Study and School Hygiene at Folkestone.—At the Congress of the Royal Institute of Public Health to be held at Folkestone, from July the 22nd to the 27th, inclusive, there will be a Section for Child Study and School Hygiene. Dr. Percy Lewis has been appointed Local Secretary, and Dr. George Carpenter London Secretary. Gentlemen desirous of contributing papers should communicate with the Local Secretary. Those anxious to attend the Congress, who are not members of the Institute, can do so by taking a delegate's ticket, price £1 1s.

Abstracts from Current Literature.

The treatment of whooping-cough.—Aristochin is a new preparation which has recently been employed in the treatment of whooping-cough by H. Kittel ('Therap. Monatshefte,' 1903, Heft 8). The dose administered to infants ranged from 0·01 g. to 0·1 g. (*i. e.* $\frac{1}{10}$th of a grain to 1½ grains) thrice daily. For children of over one year of age doses of up to 0·2 g. (*i. e.* 3 grains), thrice daily, were used. The drug is best administered in milk or water. Out of thirty-four cases treated in this way, twenty-five were completely cured and seven were improved; two were lost sight of before the completion of the treatment. The duration of the treated ranged from ten days to four weeks, and the writer found that, compared with the effects of other drugs, the duration of the disease is appreciably shortened under aristochin. Its action is especially striking in young infants, where cure resulted most rapidly. In older children the results were less striking—probably because the drug was not employed in sufficiently large doses. Aristochin was found to be especially valuable at the onset, when it may positively abort the disease. A point which alone would justify its use was the marked improvement of the appetite, with consequent improvement of the general condition, which was observed in every case. No injurious collateral effects were ever observed in the use of this drug. E. P. Baumann.

Psoriasis infantum.—Dr. Pietro Benassi ('Giornale ital. delle malattie vener. e delle pelle,' vol. xliv, 1903, p. 99) gives the following observations from the dermosyphilitic clinic at Bologna. Out of 334 cases collected only fourteen occurred before the age of 10 years, *i. e.*, 4·19 per cent.: one at 4 months, one at 1 year, one at 2 years, two at 5 years, four at 6 years, one at 7 years, and four at 8 years.

Certain differences distinguish infantile from adult psoriasis: the patches are smaller, punctate and lenticular forms predominating; it is less extensive and diffuse, and less dangerous; is complicated with moist eruptions; is less scaly, the scales being less adherent; the flexor surfaces of the trunk and limbs and the lumbo-sacral region are the parts most frequently affected; the intervals between one eruption and another are longer. These differences are caused by the special anatomical and physiological conditions of the skin. It follows vaccination, smallpox, erysipelas, and scarlatina.

T. V. Dickinson.

The vitality of children of tabetics.—Pitres publishes (in the 'Journal de Médecine de Bordeaux,' July, 1903) some interesting observations on tabes and marriage, more especially in relation to the vitality of children of tabetics. Of 240 individuals affected with tabes, 87 per cent. were married to non-tabetics: 20 per cent. of these were sterile; 15 per cent. had on an average two children each, but two thirds were stillborn, and the other third died in infancy; the remaining 135 (65 per cent.) had 416 children, of whom 130 were stillborn or died at an early age, while 286 (2·11 per family) lived beyond childhood. The general infantile mortality was high (40·7 per cent.), but Pitres does not think it directly attributable to tabes, inasmuch as those born prior to any manifestation in their parents of spinal symptoms showed a higher mortality than those born subsequently thereto (44 per cent. : 28 per cent.). The cause of the low vitality of the offspring would appear, therefore, to be the syphilitic taint in the parent, which is a condition precedent (if not the cause) in most cases of tabes. It is somewhat surprising that the children of tabetic parentage who lived beyond childhood were, with a few exceptions (according to Pitres), mentally and physically sound.

G. E. Shuttleworth.

Steeple-shaped skull.—In the curious malformation of the skull known by the Germans as "Thurmschädel," and in this country as "Oxycephaly," it is known that optic neuritis and optic atrophy may occur, while, owing presumably to the shallowness of the orbits, there is usually protrusion of the eyes. Within the last few months two cases of the kind have been reported. The first case by H. Work Dodd and W. H. McMullen ('Lancet,' June the 13th, 1903) was in a child, aged seven years, who presented a steeple-shaped skull. This was associated with marked proptosis, post-neuritic atrophy of the optic discs, defective hearing, congenital dislocation of the radius, hallux varus, genu valgum, and several

minor deformities of various parts of the body. The second case was by E. Donaldson ('Trans. Ophthal. Society,' vol. xxiii, 1903). Its salient features are as under:—A child of two and a half years was brought to Donaldson suffering from protrusion of the eyeballs and a steeple-shaped, oxycephalic skull. The condition was present at birth, and was thought to be non-progressive. There was horizontal nystagmus and a tendency to divergence. The optic discs were pallid, and sight was defective. The exophthalmos was so marked that on several occasions one eye became partially dislocated, and had to be replaced by the patient's father. Lastly, the great toes were broad; the palate was highly-arched; and hallux varus was present on each side.

SYDNEY STEPHENSON.

The development of colour-sense in infants. — Raehlmann ('Ophthal. Klinik,' November the 5th, 1903) has made some interesting investigations on the development of the colour-sense in children. Experiments by Preyer, Magnus, Cohn and others, have tended to show that they could recognise colours at a comparatively late age only. The more recent observations of Holden and Bosse on the movements of grasping have shown that children, even so early as the sixth or seventh month, respond promptly to red, orange and yellow, while a few respond to green, blue and violet. To place coloured patterns before the children and to expect children to name them, gives, it is true, a good test of the mental development of the child and of its memory for words in naming the colours, but it is obvious that the fact of the child assigning a wrong name to a particular colour does not prove that it has failed to recognise that particular colour. In order to avoid making this mistake, Raehlmann devised and carried out the following interesting experiment. Two exactly similar feeding bottles were painted outside, the one red and the other green. One of the bottles, say the red, was filled with milk and the other was left empty. Both were offered to the child at the same time side by side. The children at first showed uncertainty in their movements, but in a short time they became able to recognise the bottle containing milk. This experiment disclosed no distinction in the degree of ease with which various colours could be discriminated; as soon as the children are capable of grasping consciously, they are able to distinguish all colours with certainty. This stage is reached by some as early as the beginning of the sixth month, and by others somewhat later. SYDNEY STEPHENSON.

Reviews of Books on Children's Diseases.

Reports of The Society for the Study of Disease in Children (Edited by George Carpenter, M.D.) Vol. iii. (J. & A. Churchill.)

If the question were asked as to whether The Society for the Study of Disease in Children has justified its existence, a glance at the third volume of 'Transactions,' which has just been published, should serve to dissipate all doubts on the subject. The Society has, by centralising the results of workers and observers from various parts of the country, already done much to advance this important department of medicine and surgery, and the volumes which have been published year by year bear witness to the scientific value of the work which is contributed, insomuch that they express all that is most recent in the knowledge of pediatrics and in the practical application of that knowledge. They constitute an excellent text-book, which is automatically kept up to date by the annual publication of a substantial volume, containing not only the results of recent researches and clinical and pathological observations, but the criticisms also which have been elicited concerning them. As an example of this fact, we might direct attention, in the volume now before us, to the series of papers on tuberculous peritonitis which were read at a special meeting. The whole subject is dealt with very exhaustively, the etiology of the disease being discussed in an excellent article by Dr. Cautley, and this is followed by papers on the symptoms and diagnosis (in which are some most practical suggestions by Drs. Barr, George Carpenter, and J. Porter Parkinson), on the pathology and morbid anatomy (by Drs. Theodore Fisher, Chaffey, and George Carpenter), and on the prognosis and results of medical and surgical treatment (by Drs. G. A. Sutherland, James Carmichael, and Mr. Watson Cheyne). The Editor and Publication Committee are to be congratulated on having gathered together much valuable material, and on having produced a volume which is excellently printed and illustrated, and which has been most efficiently indexed. Charles J. Macalister.

Aids to the Treatment of Diseases of Children. By John McCaw, M.D. Second Edition. London: Ballière, Tindall, and Cox.

This little work, according to the author's preface, is a compilation designed for the benefit of students and busy general practitioners.

It is an open question whether the value of such brief treatises is commensurate with the labour spent on them by the authors. They may be useful to the student reading for an examination, or to the practitioner hurriedly looking up some point, but they will never teach any one the management of disease in childhood. When in difficulty with a restless case of pneumonia the young practitioner will naturally turn to page 114, where he will read as follows :— "For the pain in the side the following have been recommended: two leeches; a small blister; equal parts of chloroform, belladonna, and aconite liniments applied on lint; spongiopiline; linseed and mustard poultice; the ice-bag; cold lotions. The warm applications will generally be found the best. One to three drops of 'nepenthe,' one to three grains of Dover's powder, or a small hypodermic injection of morphia." One sees from the above that under the exigencies of space and the publisher Dr. McCaw has been compelled to sacrifice all guidance and precision, and even the rules of English grammar. The first sixteen pages are devoted to infant feeding; and here, again, the only method seems to be that if one food does not suit, another in the next paragraph may be tried. Dried milk foods may be "very convenient, besides being sterile," but they are also extremely deadly as a diet. The importance of sterilising all milk received in large towns is strongly insisted on, and later on the author points out that infants fed on sterilised milk for long periods may develop scurvy, rickets, etc. Of course, Dr. McCaw in his own practice would carry out infant feeding in the most scientific manner, and no doubt with the best results; but the readers of his little manual do not get the full benefit of his knowledge and experience, and in their ignorance may even be misled. The various diseases of the different systems are considered under the headings of causes, symptoms, diagnosis, morbid anatomy, prognosis, and treatment. Chapters VI and VII are devoted to fevers, and form the most useful part of the book, the description being clear and well suited to the beginner in medicine. The treatment recommended in the book is very safe and up to date, although there is rather more of poulticing and tent steaming than one is accustomed to see in the present day. Although not personally an enthusiast for medical aid works, I am sure that those who like them will find this work of Dr. McCaw's to be one of the best of its kind.

G. A. Sutherland.

Analyses and Preparations.

Mellin's Food.—This well-known preparation is a malted food, the starch of barley and wheat having been transformed into dextrin, maltose, and dextrose by means of diastase. It is entirely free from starch. It is used with milk, and directions are given for the amounts of dilution at various ages.

Horlick's Malted Milk.—This resembles the above in being a malted food, and only differs from it in the fact that Pasteurised cow's milk is combined with the malted wheat-flour in the process of manufacture, and the whole dehydrated. It is a pleasant preparation, and much liked by some children.

Notice to Subscribers and Correspondents.

The Editor has been favoured with a large number of letters from gentlemen at home and abroad approving of the inception of a journal for children's diseases in Great Britain. It is impossible to reply to all these letters individually, but correspondents are thanked collectively. The Editor would merely add that he will be at all times glad to receive suggestions in regard to the 'British Journal of Children's Diseases.'

Subscribers are notified that the Journal should reach them a few days before the nominal date of publication, viz. on the 1st of every month. It is requested that any delay in delivery may be at once notified to the publishers, Messrs. Adlard and Son, Bartholomew Close, London, E.C.

Authors of papers are entitled to twenty-five reprints of their articles provided application be made at the time of correction of the proofs.

Dr. G. E. Shuttleworth.—Yes, we are prepared to reproduce illustrations in black and white if deemed suitable.

Dr. Theodore Fisher (Bristol).—Possibly; we will try to do so.

Dr. Leonard Guthrie.—Thank you; see the present issue.

Mr. Sydney Stephenson.—Your article shall appear in a forthcoming number.

Dr. Fletcher Beach.—Your MS. has been received.

Dr. Henry Ashby (Manchester).—In our next number. The time allowed was not sufficient for the reproduction of your illustrations.

Dr. Lewis Marshall (Nottingham).—Marked for early insertion.

Tenax.—We fear the paper is not suited to our pages.

Dr. Lutaud (Paris).—Gynæcological memoranda, in so far as they relate to children, will be acceptable.

Dr. Darier (Paris).—Yes; we have noted your article on dental malformations in our contemporary 'The Ophthalmoscope.'

Dr. Carre-Smith.—Milk prescriptions are dispensed at the Walker-Gordon Laboratory, 79, Duke Street, W.